ULTRASONOGRAPHIC EVALUATION OF THE NORMAL FELINE POSTPARTUM UTERUS

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INTRODUCTION

- MOST COMMON CLINICAL APPROACHES TO DIAGNOSING FEMALE REPRODUCTIVE SYSTEM DISORDERS IN THE CAT ARE:
  - ULTRASONOGRAPHIC
  - Palpation
  - Radiographic
  - Vaginal discharge, cytology
  - Hematological examination – routine study

- THE POSTPARTUM PERIOD IN THE CAT – paucity of information in the literature
  - Complications such as metritis, pyometra, fetal retention, retained placenta, hemorrhages subinvolution of placental sites can occur postpartum
ULTRASONOGRAPHY ALLOWS PRECISE VISUALIZATION OF UTERINE:

- Wall
- Intraluminal contents

- Ultrasonography is a safe and accurate method.
- No risks to either the operator or patient have been identified.

STUDIES ON ULTRASONOGRAPHIC EVALUATION OF THE FELINE POSTPARTUM UTERUS ARE SCARCE. THERE IS ONLY TWO STUDIES:

- Ferretti et al. (2000) – 10 MHz transducer
- Sendağ et al. (2007) - 7,5 MHz transducer
The purpose of this study was to identify the normal ultrasonographic appearance of the feline postpartum uterus.
MATERIALS AND METHODS

- ANIMALS – 10 CLINICALLY HEALTHY FEMALE AND 2 MALE CATS on day 25 after mating – ultrasonographic pregnancy diagnosis.

- Normal spontaneous parturition.

- Daily clinical examinations were performed.

  - Vulvovaginal discharge postpartum were controlled.
MATERIALS AND METHODS

ULTRASONOGRAPHIC EXAMINATIONS OF UTERUS:

- Starting immediately postpartum,
- Continued daily until the cornua were difficult to locate in the abdominal cavity.

  - All images were acquired using a 5 MHz linear array transducer.

Determined parameters:

- External diameter of the uterus;
  - In placentation sites;
  - In interplacentation sites.
- Uterine wall thickness;
- Echogenicity uterine contents.

For each cat status after 2 consecutive parturitions were investigated (total 20).
Slightly blood tinged vaginal discharge for 2.4 ± 1.2 days.

Ultrasonographic findings. All measurements in cm.

<table>
<thead>
<tr>
<th>Moment/day after parturition</th>
<th>Diameter of the uterus</th>
<th>Uterine wall thickness</th>
<th>Uterine contents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In placentaion sites</td>
<td>In interplacentation sites</td>
<td></td>
</tr>
<tr>
<td>immediately</td>
<td>2.8±0.12</td>
<td>1.53±0.15</td>
<td>0.45±0.02</td>
</tr>
<tr>
<td>1</td>
<td>1.81±0.15</td>
<td>1.1±0.08</td>
<td>0.4±0.01</td>
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<tr>
<td>2</td>
<td>1.58±0.11</td>
<td>0.99±0.06</td>
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<tr>
<td>3</td>
<td></td>
<td>0.95±0.2*</td>
<td>Not discernible</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>0.84±0.14*</td>
<td>Not discernible</td>
</tr>
</tbody>
</table>
RESULTS

In placentation site. Immediately postpartum.

In placentation site. Day 2 postpartum.

In interplacentation sites. Day 2 postpartum.

For comparison. Day 1 after abortion.
Placental sites remained enlarged and fluid-filled for one day after abortion.
In summary the results from this study in the cats:

- By ultrasound examinations based on a transabdominal ultrasound scanner with a 5 MHz linear-array transducer cornua could be seen in the abdominal cavity up to day 4 postpartum.

- Placental regions involute faster than nonplacental regions.

- Luminal contents is isoechoic compared to echogenicity of the uterus wall.

- Diameter reduction of the postpartum uterus is due predominant to lessening of luminal contents but not to uterine wall thickness reduction.
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